

This listing of claims will replace all prior versions, and listing, of claims in the application:

Listing of Claims

1, - 6632. (Canceled)

6633. (Previously presented) A system configured to determine at least two properties of a specimen, comprising:

a spectroscopic ellipsometer configured to generate one or more output signals during measurement of the specimen; and

a processor coupled to the spectroscopic ellipsometer and configured to determine a critical dimension and a thin film characteristic of the specimen from the one or more output signals.

6634. (Previously presented) The system of claim 6633, wherein the system is further configured as a stand-alone device.

6635. (Previously presented) The system of claim 6633, wherein the system is integrated into a process tool.

6636. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at an oblique angle of incidence.

6637. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at an oblique angle of incidence with a light beam comprising visible and ultraviolet light.

6638. (Previously presented) The system of claim 6333, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at a normal angle of incidence.

6639. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at a normal angle of incidence with linearly polarized light.

6640. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at a normal angle of incidence with polarized light.

6641. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at a normal angle of incidence with polarized, visible light.

6642. (Previously presented) The system of claim 6633, wherein the spectroscopic ellipsometer is further configured to focus light to a small spot on the specimen.

6643. (Previously presented) The system of claim 6633, wherein the processor is further configured to use the thin film characteristic to determine the critical dimension.

6644. (Previously presented) The system of claim 6633, wherein the system is coupled to a stand-alone metrology or inspection system, and wherein the systems are configured such that signals may be sent between the systems.

6645. (Previously presented) The system of claim 6633, wherein the thin film characteristic comprises optical properties of one or more layers on the specimen.

6646. (Previously presented) The system of claim 6633, wherein the critical dimension comprises a lateral dimension of a feature on the specimen defined in a direction substantially parallel to an upper surface of the specimen, a lateral dimension of the feature defined in a direction substantially perpendicular to the upper surface of the specimen, or a sidewall angle of the feature.

6647. (Previously presented) The system of claim 6633, wherein the specimen comprises a wafer.

6648. (Previously presented) The system of claim 6633, wherein the specimen comprises a substrate suitable for fabrication of a reticle.

6649. (Previously presented) A system configured to determine at least two properties of a wafer, comprising:

a spectroscopic ellipsometer configured to generate one or more output signals during measurement of the wafer, wherein the spectroscopic ellipsometer is integrated into a lithography track; and

a processor coupled to the spectroscopic ellipsometer and configured to determine a critical dimension and a thin film characteristic of the wafer from the one or more output signals.

6650. (Previously presented) The system of claim 6649, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at an oblique angle of incidence with a light beam comprising visible and ultraviolet light.

6651. (Previously presented) The system of claim 6649, wherein the spectroscopic ellipsometer is further configured to illuminate the specimen at a normal angle of incidence with polarized, visible light.

6652. (Previously presented) The system of claim 6649, further comprising a controller computer configured to control a temperature within the track.